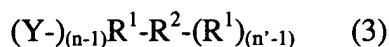


Amendments to and listing of the Claims:

Claims 3 & 4 are amended. Please add new claims 7-10 as follows. This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Original) A method for producing a cross-coupling compound of formula (3):



wherein R^1 represents

a substituted or unsubstituted, linear, branched, or cyclic hydrocarbon group, and

n and n' each represent 1 or 2,

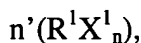
provided that when n and n' are the same, both n and n' are not 2,

R^2 represents a substituted or unsubstituted aryl, substituted or unsubstituted heteroaryl or substituted or unsubstituted alkenyl group, and

Y represents R^2 or X^1 , wherein R^2 is as defined above, and X^1 represents a chlorine, bromine or iodine atom,

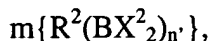
which method comprises reacting

an organic halide of formula (1):



wherein R^1 is as defined above and carbon atoms at the α and β positions relative to X^1 are sp^3 carbon atoms, and X^1 , n and n' are as defined above,

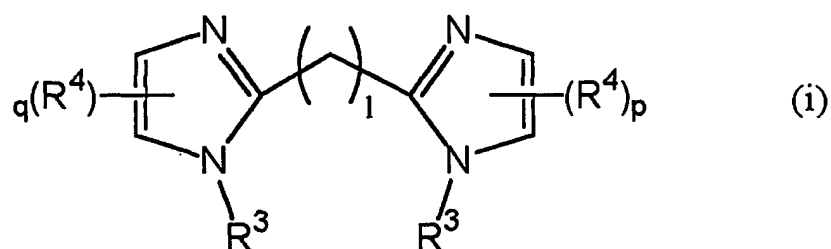
with a boron compound of formula (2):



wherein R^2 and n' are as defined above,

X^2 independently represents a hydroxyl group or an alkoxy or aryloxy group, or X^2_2 together form an alkylenedioxy or arylenedioxy group, and m represents 1 or 2, and $m \leq n$, and the boron atom is bonded with a sp^2 carbon atom of R^2 group, or a boronic acid trimer anhydride thereof,

in the presence of a base and a catalyst comprising a nickel compound and a compound of formula (i):



wherein R^3 represents a substituted or unsubstituted alkyl group,

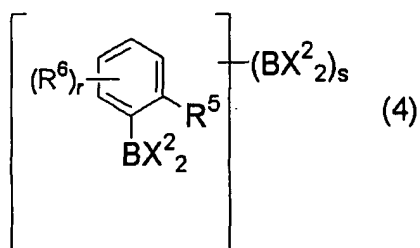
R^4 represents a hydrogen atom or an substituted or unsubstituted alkyl group,

l represents an integer of 1 to 3, and

p and q independently represent an integer of 0 to 2.

2. (Original) A method according to Claim 1, wherein R^3 is methyl in the compound of formula (i).

3. (Currently Amended) A method according to Claim 1 or 2, wherein the boron compound of formula (2) is a compound of formula (4):



wherein R^5 represents a hydrogen atom,

X^2 groups independently represent a hydroxyl group or an alkoxyl group, or the alkoxy groups together form an alkylenedioxy group, or

X^2_2 represent $-O-B(R^{20})-O-B(R^{20})-O-$, wherein R^{20} represents the phenyl residue as defined in connection with formula (4) above,

r represents an integer of 0 to 4,

s represents 0 or 1, $r+s \leq 4$ when the benzene ring does not form a condensed aromatic ring,

R^6 groups are the same or different and each independently represent a substituted or unsubstituted aryl group,

a substituted or unsubstituted linear or cyclic alkenyl group, or

4. (Currently Amended) A method according to ~~any one of claims 1 to 3~~ claim 1, wherein the nickel compound is a nickel salt or a π complex compound of zero-valent or divalent nickel.

6. (Original) A catalyst according to Claim 5, wherein the nickel compound is a nickel salt or a π complex compound of zero-valent or divalent nickel.

$$\left[\begin{array}{c} (R^6)_r \\ \text{---} \end{array} \text{C}_6\text{H}_3 \begin{array}{c} R^5 \\ \text{---} \end{array} \text{BX}^2_2 \right]_s \quad (4)$$

X² groups independently represent a hydroxyl group or an alkoxy group, or the alkoxy groups together form an alkylendioxy group, or

r represents an integer of 0 to 4,

5

R^6 groups are the same or different and each independently represent a substituted or unsubstituted aryl group,

a substituted or unsubstituted heteroaryl group, or

a substituted or unsubstituted linear or cyclic alkenyl group, or

R^6 groups connected with the adjacent carbon atoms of the benzene ring are bonded to form an ortho-condensed, or ortho and peri-condensed polycyclic aromatic ring.

8. (New) A method according to claim 2, wherein the nickel compound is a nickel salt or a π complex compound of zero-valent or divalent nickel.

9. (New) A method according to claim 3, wherein the nickel compound is a nickel salt or a π complex compound of zero-valent or divalent nickel.

10. (New) A method according to claim 7, wherein the nickel compound is a nickel salt or a π complex compound of zero-valent or divalent nickel.